

## ABSTRACT OF THE DISCLOSURE

A method for a combined adaptive digital pre-distorter and pre-equalizer apparatus in single- and/or multiple-link hopping radio systems including hopping among a plurality of radio links to transmit variable-length bursts of radio signals on the plurality of radio links. Further, pre-distorting amplitude and phase of transmitted signal constellations based on the inverse AM-to-AM and AM-to-PM characteristics and the operating conditions of the high-power amplifier, respectively. Further, pre-equalizing amplitude and group-delay variations of the transmit RF radio using the pre-stored estimated complex tap coefficient of the pre-equalizer under different frequency bands.

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